# Recombinant Escherichia coli Murein hydrolase activator NlpD (nlpD)

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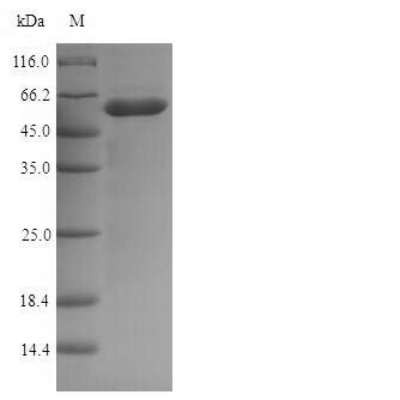
| **Product Code** | CSB-EP359913ENV |
| **Relevance** | Activator of the cell wall hydrolase AmiC. Required for septal murein cleavage and daughter cell separation during cell division. |
| **Storage** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |
| **Uniprot No.** | P0ADA3 |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Escherichia coli (strain K12) |
| **Purity** | Greater than 90% as determined by SDS-PAGE. |
| **Sequence** | CSDTSNPPAPVSSVNGNAPANTNSGMLITPPPKMGTTSTAQQPQIQPVQQPQI QATQQPQIQPVQPVAQQPVQMENGRIVYNRQYGNIPKGSYSGSTYTVKKGDT LFYIAWITGNDFRDLAQRNNIQAPYALNVGQTLQVGNASGTPITGGNAITQADA AEQGVVIKPAQNSTVAVASQPTITYSESSGEQSANKMLPNNKPTATTVTAPVT VPTASTTEPTVSSTSTSTPISTWRWPTEGKVIETFGASEGGNKGIDIAGSKGQA IIATADGRVVYAGNALRGYGNLIIIKHNDDYLSAYAHNDTMLVREQQEVKAGQKI ATMGSTGTSSTRLHFEIRYKGKSVNPLRYLPQR |
| **Lead Time** | 3-7 business days |
| **Research Area** | Microbiology |
| **Source** | E.coli |
| **Gene Names** | nlpD |
| **Protein Names** | Recommended name: Murein hydrolase activator NlpD |
| **Expression Region** | 26-379aa |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| **Tag Info** | N-terminal 6xHis-SUMO-tagged |
| **Mol. Weight** | 53.5kDa |
| **Protein Description** | Full Length of Mature Protein |
| **Image** | |




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

This recombinant E.coli K12 nlpD protein is an E.coli-expressed protein (Full Length of Mature Protein). At the theoretical level, the steps needed for obtaining a recombinant protein are pretty straightforward. Obtain the nlpD gene, clone it in an expression vector, transform it into the host of choice, induce it, and then, the protein is ready for purification and characterization. In practice, however, dozens of things can go wrong. Poor growth of the host, inclusion body formation, protein inactivity, and even not obtaining any protein at all are some of the problems often found down the pipeline. So we choose the most suitable strain and vector for this recombinant nlpD protein expression and adopt the most optimized expression condition and purification method. Finally, mild condition and subsequent cumbersome protein-refolding procedures ensure this nlpD protein is soluble.

nlpD is a protein encoding gene that provides an instruction in making a protein named murein hydrolase activator NlpD. The protein encoded by this gene belongs to E.coli NlpD/Haemophilus LppB family. It is similar in sequence to the LppB lipoprotein outer membrane antigen of Haemophilus somnus in Escherichia coli. This protein has metalloendopeptidase activity and is involved in multiple biological processes, including cell cycle, positive regulation of hydrolase activity, response to drug and septum digestion after cytokinesis.

## Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.